

IN THE CLAIMS:

The text of all pending claims, 1-8, is set forth below. The status of each claim is indicated with (original), (currently amended) or (previously presented).

1. (previously presented) An abnormality detection device for detecting an abnormality in a communication bus, the device comprising:

a timer counter to measure a time during which a signal transmitted through said communication bus continues to be a first logical level; and

a comparator to compare the time measured by said timer counter with a threshold value and to output an abnormality detection signal indicating an abnormality in said communication bus when the time surpasses said threshold value, wherein the abnormality detection device is independent of a CPU controlling the communication bus.

2. (original) The abnormality detection device as claimed in claim 1, wherein said timer counter is initialized at intervals determined according to an event signal supplied thereto.

3. (original) The abnormality detection device as claimed in claim 2, comprising at least two units of said timer counter and said comparator, the timer counter in each of said units being individually initialized at said intervals.

4. (original) The abnormality detection device as claimed in claim 1, further comprising:

a plurality of comparison value registers respectively storing a plurality of threshold values; and

a selector selecting a threshold value from among said plurality of said threshold values according to a selection signal supplied thereto so as to supply said threshold value to said comparator.

5. (previously presented) An abnormality detection device for detecting an abnormality in a communication bus, the device comprising:

at least two timer counters each to measure a time during which a signal transmitted through said communication bus continues to be a first logical level;

a register to cumulatively add the time measured by at least one of said at least

two timer counters, the register being initialized at predetermined intervals; and
a comparator to compare the time cumulatively added by said register with a threshold value and to output an abnormality detection signal indicating an abnormality in said communication bus when the cumulative time obtained by said register surpasses said threshold value, wherein the abnormality detection device is independent of a CPU controlling the communication bus.

6. (original) The abnormality detection device as claimed in claim 5,
wherein said register supplies said cumulative time to at least one of said at least two timer counters, and

said at least one of said at least two timer counters measures the time by using said cumulative time as an initial value.

7. (previously presented) A microcomputer connected to a communication bus, the microcomputer comprising:

a timer counter to measure a time during which a signal transmitted through said communication bus continues to be a first logical level; and

a comparator to compare the time measured by said timer counter with a threshold value and to output an abnormality detection signal indicating an abnormality in said communication bus when the time surpasses said threshold value, wherein the microcomputer is independent of a CPU controlling the communication bus.

8. (previously presented) An abnormality detection device to detect an abnormality in a communication bus, the device comprising:

at least two timer counters each to measure a time during which a signal transmitted through said communication bus continues to be a first logical level;

a register to cumulatively add the time measured by at least one of said at least two timer counters, the register being initialized at predetermined intervals; and

a comparator to compare the time cumulatively added by said register with a threshold value and to output an abnormality detection signal indicating an abnormality in said communication bus when the cumulative time obtained by said register surpasses said threshold value,

wherein said register supplies said cumulative time to at least one of said at least two timer counters, and

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said at least one of said at least two timer counters measures the time by using said cumulative time as an initial value.